

WHAT IS CLAIMED IS:

1. An automatic gain control apparatus comprising:
 - a variable gain amplifier that amplifies a received signal with set gain;
 - 5 a current position acquiring section that acquires current position of its own station at a start of communication;
 - an estimation section that calculates a communication distance from a communication partner station based on said
 - 10 acquired current position of its own station and estimates a receive level of the received signal at the start of communication based on said calculated communication distance; and
 - an initial value setting section that sets an initial
 - 15 value for said gain based on the estimated receive level of said received signal.
2. The automatic gain control apparatus according to claim 1, further comprising:
 - 20 a storing section that stores position information of said communication partner station,
 - wherein said estimation section calculates said communication distance from said communication partner station based on said acquired current position of its own
 - 25 station and the stored position information of said communication partner station.

3. The automatic gain control apparatus according to claim 1, further comprising:

a detection section that detects a power level of said received signal amplified with said gain by said variable gain amplifier; and

a control section that controls setting of said gain of said variable gain amplifier after the start of communication based on said detected power level.

10 4. A radio communication apparatus comprising an automatic gain control apparatus according to claim 1.

5. An automatic gain control method comprising the steps of:

15 amplifying a received signal with set gain;

acquiring current position of its own station at a start of communication;

calculating a communication distance from a communication partner station based on said acquired current position of its own station;

20 estimating a receive level of the received signal at the start of communication based on said calculated communication distance; and

setting an initial value for said gain based on the estimated receive level of said received signal.